CLAIMS

1. A method of transferring a number of carried data streams from a first table operated device to a second table operated device via a common carrying data stream, wherein a so-called carried data stream is a sequence of mutually related stream elements, wherein said carrying data stream is organised into frames, and wherein each frame includes stream elements that belong to one or more different carried data streams, **characterised** in that frame multiplexing is used to combine stream elements belonging to one or more different data streams into a common frame; in that used frame structures include a frame descriptive index; in that said index includes a reference to a position in a frame descriptive table stored locally in both said first table operated device and said second table operated device; in that a so-called control stream is setup between a so-called control unit and said first and said second table operated devices; and in that control information required to establish a new frame structure, to change an existing frame structure, or to remove a present frame structure, is transferred between said controlled unit and said first and said second table operated devices via said control stream.

2. A method according to Claim 1, **characterised** in that said index is divided into two parts; in that a first part includes a reference or pointer to a position in said frame descriptive table; and in that a second part includes a mask which enables a number of data streams to be defined, such as transferred with the frame structure concerned.

3. A method according to Claim 1 or 2, **characterised** in that said control information includes information required to unambiguously determine the size and position of respective stream elements included in a changed frame structure; and in that an effected change includes guaranteed consistency between said control unit and said first and second table operated devices respectively with regard to the frame descriptive tables used.

4. A method according to Claim 3, **characterised** in that said control stream is transferred between said first and said second table operated devices separately from said carrying data stream.

5. A method according to Claim 3, **characterised** in that said control stream is comprised of a stream carried by said carrying stream, either completely or partially.

6. A method according to Claim 4 or 5, **characterised** in that said control information includes a type-determination of the control information; and in that said type-determination indicates the type of change to which the stream control information relates and in which phase of the change said stream control information shall be used.

7. A method according to Claim 6, **characterised** in that when including a new data stream in the creation of a new frame structure, said control unit functions to create a new frame structure that includes a new stream element belonging to said new data stream.

8. A method according to Claim 7, **characterised** in that said control unit sends control information to said first and said second table operated devices via said control stream, wherein said control information includes a type-determination of said message, a disclosure of a new frame descriptive index, a disclosure of the identity of a new data stream, a disclosure of a start address for the new stream element within the new frame structure, and a disclosure of the length of said new stream element; and in that said first and said second table operated devices return the control information to said control unit via said control stream, wherein said control information includes a type-determination of said message, an identification of said new frame descriptive index, and a terminating address for said new stream element within said new frame structure.

9. A method according to Claim 6, **characterised** in that with the insertion of a new data stream into an existing frame structure, the control unit functions to create a new frame structure where a new stream element belonging to said new data stream is added after the last stream element belonging to a frame according to the old frame structure.

10. A method according to Claim 9, **characterised** in that said control unit sends control information to said first and said second table operated devices via said control stream, wherein said control information includes a message type-determination, an identification of the old frame descriptive index, a disclosure of the new data stream identity, a disclosure of the start address for a new stream element within the new frame structure, and a disclosure of the length of said new stream elements; and in that said first and said second table operated devices returns the control information to said control unit via said control stream, wherein said control

information includes a message type-determination, an identification of said new frame descriptive index, and a terminating address for said new stream element within said new frame structure.

11. A method according to Claim 6, **characterised** in that in removing an existing data stream in an existing frame structure, said control unit functions to create a new frame structure from which the stream elements concerned are excluded.

12. A method according to Claim 11, **characterised** in that said control unit sends control information to said first and said second table operated devices via said control stream, wherein said control information includes a message type-determination, identification of the old frame descriptive index, a disclosure of a new frame descriptive index, and a disclosure of the identity of removed data stream; and in that said first and said second table operated devices return the control information to said control unit via said control stream, wherein said control information includes a message type-determination, identification of said new frame descriptive index, and a new frame structure terminating address.

13. A method according to Claim 6, **characterised** in that in changing available space for an existing stream element in an existing frame structure, said control unit functions to create a new frame structure which excludes the stream elements concerned, wherein any subsequent stream elements accompany any preceding stream elements, and wherein a new stream element with the new space is added to the end of the frame structure concerned.

14. A method according to Claim 13, **characterised** in that said control unit sends control information to said first and said second table operated devices via said control stream, wherein said control information includes a message type-determination, identification of the old frame descriptive index, a disclosure of a new frame descriptive index, a disclosure of the identity of the data stream concerned, a disclosure of the start address of a new stream element within the new frame structure, and a disclosure of the length of said new stream element; and in that said first and said second table operated devices return control information to said control unit via said control stream, wherein said control information includes a message type-determination, an identification of said new frame descriptive index, and a terminating address for said new stream elements within said new frame structure.

15. A method according to Claim 8, 10, 12 or 14, **characterised** in that the frame descriptive table concerned is updated in accordance with given instructions at said first and said second table operated devices; and in that a respective change to a frame structure is terminated with an acknowledgement message from said control unit to said first and said second table operated devices and from said first and said second table operated devices to said control unit via said control stream, wherein the control information includes a message type-determination and an identification of said new frame descriptive index, whereafter said new frame structure can be used.

16. A method according to Claim 3, **characterised** in that in the removal of an existing frame structure said control unit functions to remove a corresponding position in the frame descriptive table of said first and said second table operated devices.

17. A method according to Claim 16, **characterised** in that said control unit sends control information to said first and said second table operated devices via said control stream, wherein said control information includes a message type-determination and a disclosure of the frame descriptive index of the removed frame structure; and in that said first and said second table operated devices return control information to said control unit via said control stream, wherein said control information includes a message type determination and a disclosure of the frame descriptive index of the removed frame structure.

18. A method according to any one of Claims 5 to 17, **characterised** in that control information belonging to two or more changes that concern the same or different frame structures is transferred in a common stream element belonging to said control stream.

19. A method according to any one of Claims 5 to 18, **characterised** in that a plurality of different frame structures include a stream element belonging to said control stream.

20. A method according to any one of Claims 5 to 18, **characterised** in that all available frame structures include a stream element belonging to said control stream.

21. A method according to Claim 4 or 5, **characterised** in that said control unit is adapted to form internally said frame descriptive table in accordance with requisite changes; and in that said control information includes a thus formed table.

22. A method according to Claim 21, **characterised** in that said frame descriptive table is sent to said first and said second table operated devices; and in that the consistency between said control unit and said first and second table operated devices is guaranteed with respect to the frame descriptive table used.

23. A method according to any one of the preceding Claims, **characterised** in that said first table operated device is adapted to multiplex incoming data streams to a common carrying data stream; and in that said first table operated device is adapted to select dynamically a frame structure in accordance with the current transmission requirement in forming said carrying data stream.

24. A method according to Claim 23, **characterised** in that said first table operating device includes a so-called presence vector; in that said presence vector represents the current requirement for said first table operated device; in that a frame selecting unit includes a number of frame element vectors; in that each position in said frame descriptive table is represented by a frame element vector; in that respective frame element vectors include a position for each position in said presence vector; in that each position indicates whether or not a stream element marked in said presence vector can be transmitted by means of the frame structure that is represented by the table position that belongs to the frame element vector concerned; and in that said frame selecting unit can find a frame structure that suits the current transmission requirement by matching between a presence vector and said frame element vectors.

25. A method according to Claim 24, **characterised** in that said frame element vectors are updated in conjunction with updating said frame descriptive table.

26. A method according to Claim 23, 24 or 25, **characterised** in that said first table operated devices form a recursively constructed carrying data stream from said incoming data streams.

27. A method according to any one of Claims 1 to 22, **characterised** in that said second table operated devices are adapted to demultiplex an incoming carrier data

stream by causing said second table operated devices to extract carried data streams from said incoming carrying data stream.

28. A method according to Claim 27, **characterised** in that said second table operated devices are caused to extract said carried data streams from a recursively constructed carrying data stream.

29. A table operated device, **characterised** in that said device includes a frame descriptive table that discloses how different frame structures are constructed and whereby a transformation between carried data streams and a carrying data stream is possible; in that said table can be changed or updated in accordance with instructions from a control device; and in that said table operated device is adapted to function in a group of two or more table operated devices where a common table is used within said group to enable a common definition of frame structures employed in the group to be used.

30. A first table operated device according to Claim 29, **characterised** in that said first table operated device is adapted to multiplex incoming data streams; and in that said first table operated device is adapted to select dynamically a frame structure in accordance with the current transmission requirement in creating a carrying data stream.

31. A first table operated device in accordance with Claim 29, **characterised** in that said first table operated device is related to a number of contact points for incoming streams, to at least one reception buffer in connection with respective contact points adapted to store incoming stream elements, and to a transmission buffer adapted to store outgoing stream elements; in that a so-called presence vector having a position for each reception buffer is adapted to indicate in each position whether or not a stream element is stored in a respective reception buffer; in that a frame selecting unit is adapted to translate said presence vector to a table position in said frame descriptive table, said position denoting a frame structure that corresponds to a transmission requirement according to said presence vector; in that a frame forming unit is adapted to form a frame according to the given frame structure by storing in said transmission buffer an index that corresponds to said table position, and by transmitting stream elements from respective reception buffers to said transmission buffer in accordance with the given frame structure; and

in that a transmission unit is adapted to transmit said formed frame from said transmission buffer as a carrying data stream.

32. A first table operated device according to Claim 31, **characterised** in that stream elements from one and the same incoming stream may be of different types, such as of different sizes; and in that different types of stream elements from the same incoming data stream are allocated different positions in said presence vector.

33. A first table operated device according to Claim 31, **characterised** in that stream elements from one and the same incoming stream may be of different types, such as of different sizes; and in that different types of stream elements from the same incoming data stream are represented by different numbers in the same positions within said presence vector.

34. A first table operated device according to Claim 31, 32 or 33, **characterised** in that said frame selecting unit includes a number of frame elements vectors; in that each position in said frame descriptive table is represented by a frame element vector; in that respective frame element vectors include a position for each position in said presence vector; in that each position is adapted to show whether or not a stream element stored in a reception buffer, and therewith marked in said presence vector, can be transmitted by means of the frame structure represented by the table position that belongs to the frame element vector concerned; and in that said frame selecting unit is able to find a frame structure that suits said presence vector by matching between a presence vector and said frame element vectors.

35. A second table operated device according to Claim 29, **characterised** in that said second table operated device is adapted to demultiplex an incoming carrying data stream; and in that said second table operated device is adapted to extract carried data streams from an incoming carrying data stream.

36. A second table operated device according to Claim 35, **characterised** in that said second table operated device is related to an input buffer adapted to receive frames belonging to an incoming carrying data stream, and to a number of contact points for outgoing streams, and also to an output buffer in connection with respective contact points; in that an extraction unit is adapted to extract stream elements from received frames with a starting point from index and said frame descriptive table, and store respective stream elements in intended output buffers.

37. A second table operated device according to Claim 36, **characterised** in that the frame descriptive table contains information as to whether respective stream elements include information as to which output buffer the stream element concerned shall be stored.

38. A first arrangement comprising a first table operated device according to any one of Claims 30 to 34, **characterised** in that a first stream of said incoming streams constitutes a carrying stream from a third table operated device; and in that said third table operated device is adapted to transmit a carrying data stream.

39. A first arrangement according to Claim 38, **characterised** in that said first table operated device is adapted to receive frame structures of different sizes from said third table operated device, such as different types of stream elements.

40. A first arrangement according to Claim 38 or 39, **characterised** in that said first table operated device and said third table operated device form two table operated devices belonging to a common multiplexing unit.

41. A first arrangement according to Claim 38 or 39, **characterised** in that said first table operated device and said third table operated device form two table operated devices that belong to mutually different units.

42. A second arrangement comprising a second table operated device according to Claim 35, 36 or 37, wherein said incoming carrying data stream includes a first carried data stream, and wherein said first carried data stream constitutes a carrying data stream *per se*, **characterised** in that the arrangement includes a fourth table operated device which is adapted to receive said first carried data stream from said second table operated device; and in that said fourth table operated device is adapted to receive a carrying data stream.

43. A second arrangement according to Claim 42, **characterised** in that said second table operated device and said fourth table operated device form two table operated devices that belong to a common demultiplexing unit.

44. A second arrangement according to Claim 42, **characterised** in that said second table operated device and said fourth table operated device form two table operated devices that belong to mutually different units.

45. A third arrangement comprising a first arrangement according to Claims 38 to 41, and a second arrangement according to Claims 42 to 44, **characterised** in that said first and said second table operated devices co-act by means of a first table; and in that said third and said fourth table operated devices co-act by means of a second table.

46. A third arrangement according to Claim 45, **characterised** in that said first table and said second table are handled by a common control unit.

47. A third arrangement according to Claim 45, **characterised** in that said first table is handled by a first control unit; and in that said second table is handled by a second control unit.